

area in which this disease is discovered is called an infected area, and a warning is issued that only immune varieties may be grown.

Any person who has moved to a fresh locality would be advised to find out whether this area is infected with the disease before planting his potatoes. If it is infected he should grow only immune varieties, and he will then be quite safe.

If a seed potato catalogue is examined it will be seen that some varieties are marked as immune. This means that these varieties will not take wart disease and can be safely grown anywhere.

It does not mean that they are immune to all diseases, sometimes thought, but only to this very serious trouble.

Good immune varieties include: First early—Arran Comet, Second early—Great Scott. Main crop—Majestic and Kerr's Pink.

There are also a number of other immune varieties to choose from.

*The Potato Eelworm.*—This is a comparatively new pest, which has caused serious damage in several important potato growing areas. This pest was found on several groups of allotments in Cumberland last autumn, and every effort should be made to prevent it spreading. Symptoms: Patches of potatoes, small or large, may be noticed making rather poorer growth than the rest of the plot. The bottom leaves of such plants begin to turn brown and die early in the season and often the haulm is brown and dead by July. If the roots of such plants are examined in July or August, a number of white dots about the size of a pin-head may be seen on the rootlets. These white dots show that the potato eelworm is the cause of the trouble. Affected plants usually either bear only very small tubers or none at all.

The white dots seen on roots of affected plants are the eggs of female eelworms. These turn brown later in the season, and in September and October die and fall off the roots in to the soil. Each dead female eelworm contains between 100 and 200 eggs and is called a cyst. These cysts remain in the soil all the year and in the operations of digging and cultivating are spread over a wider area. In spring they burst and liberate the eggs, which soon hatch, and, if a potato crop is grown on the same soil the next season, the eelworms force their way into the roots. They live in the roots until June, when they pair, and the females rapidly increase in size, become globular in shape, and force their way through the skin of the roots. They are then visible as white dots on the roots.

This pest can be spread by affected haulm being carried about, also on cart wheels, on the boots of workers, and on garden tools.

#### REMEDIES FOR POTATO EELWORM

1. As the eelworms only attack potatoes, the pest can be kept down by changing the potato area each year.

Affected plants should be lifted early in the season, while the cysts are still attached to the roots, and burned on the spot. The tubers (if any) are quite good for food, but it is not advisable to use them for seed.

3. A dressing of Naphthalene (4 ozs. per square yard), forked into the soil about 14 days before planting, has been found to check the pest in some areas, but owing to expense this remedy could only be tried on small plots.

#### A WONDERFUL WEED-KILLER

(Continued)

The article in our last JOURNAL about sodium chlorate and its excellent qualities as a non-poisonous weed-killer has created considerable interest. Readers have written stating that they cannot obtain it from seedsmen or chemists and their societies cannot afford to buy in large quantities direct from the importers.

Accordingly we have arranged with the National Horticultural Supplies, Ltd., Wakefield Road, Huddersfield, to pack it in small quantities suitable for societies and their members.

Last quarter we emphasised the need for using this chemical to rid roadways and paths of strong-growing weeds, in order to improve the appearance of allotments on the lines of the National Amenities Scheme.

We now wish to call attention to another use to which this chemical can be put.

Every cultivator of the soil knows that some land is infested with noxious weeds which no amount of cultivation can destroy. Farmers sometimes resort to bare fallowing and allow the land to lie idle for a whole year in order to check the growth of these objectionable weeds.

But this waste of time and money can be saved, for experiments have shown that the application of chlorates in the autumn controls a high percentage of almost all weeds.

For deep-rooted weeds from  $\frac{3}{4}$  to 1½ lb. is sufficient for a rod, i.e. 30½ square yards. A more even distribution would be secured if the chlorates were applied in solution—although it could be used dry in the same way as a fertiliser if desired.

Such quantities as above are, however, a heavy dressing and are only needed in the case of very strong growing weeds such as couch and creeping thistle, or to clear away all weeds of whatever kind.

For shallow rooted weeds the solution applied at  $\frac{1}{4}$  of this strength or even less would be quite effective. By spraying in September or early October, complete clearance is effected, particularly with regard to thistles and other tap-rooted weeds.

Turnips should not be sown on the ground treated, until a year has elapsed, but potatoes, cabbages and peas may be sown the following spring after treatment.